

# ENGINEERING CHANGE NOTICE

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## PART I

### Brief description of the functional changes :

This ECR describes recommended color coding of PCI Express connectors on system boards to be black.

### Specification(s) this proposed change is against:

PCI Express Card Electromechanical Specification 1.0a

### Benefits as a result of the changes:

The proposed changes minimizes potential confusion by manufacturing, service, and installation personnel when installing PCI and PCI Express adapter cards into systems. This will minimize the risk of card damage from insertion into the wrong type of slot.

### An assessment of the impact to the existing revision and systems that currently conform to the PCI specification:

Impact is confined only to the PCI Express systems which are still under initial development.

### An analysis of the hardware implications:

All systems which have PCI Express slots are recommended to have these connectors colored black. Exceptions will be made for vendors employing different color schemes on their system boards.

### An analysis of the software implications:

None

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## PART II

**THE FOLLOWING CRITERIA APPLIES TO DEFINING A RESERVED PIN ON THE PCI CONNECTOR OR TO REQUEST A NEW COMMAND:**

- The function is deemed to be important for the Continued growth and long-term well being of PCI. (A short-term fix to a problem does not merit consideration, i.e., IDEIRZ14.)
- There is no other effective way for the function to be implemented except using a reserved pin or new command. (Is there a solution that can be implemented in configuration space?)

|   |
|---|
| <b>Describe how the new function (on an Add-in Card) works with an existing system and other existing Add-in Cards?</b>   |
| N/A   |
|   |
| <b>Describe how existing Add-in Cards work when added into a system with the new function?</b>  |
| N/A   |
|   |
| <b>Are there any combinations not addressed by the previous two items? If yes, specify them and describe the interaction between new device and existing devices.</b> |
| N/A   |
|   |

## Why the proposed change is needed

The present CEM spec (PCI Express Card Electromechanical Specification 1.0a) does not define the color of the PCI Express connectors. The PCI specification has a specified color of white connectors (Table 5.1, PCI Local Bus Specification, Rev 2.3). A system with mixed PCI and PCI Express connectors should provide quick, easily identifiable information as to the different bus types in the system to minimize confusion during card insertion. Therefore, a color that has high contrast with the white of the PCI connectors is needed. After feedback from workgroup members, the color of the connector will be changed from a requirement to a recommendation to allow OEMs to match other color-coding schemes.

## Description of the proposed change:

1. Make the following changes **in bold blue** to the last paragraph on page 65:

**Table 5-6: Additional Requirements**

| Parameter              | Procedure       | Requirement   |
|------------------------|-----------------|---|
| Flammability           | UL94V-1 minimum | Material certification or certificate of compliance required with each lot to satisfy the Underwriters Laboratories follow-up service requirements. |
| Lead-free soldering    |                 | Connector must be compatible with lead free soldering process.  |
| <b>Connector Color</b> |                 | <b>Color of the connector should be black. Exceptions will be made for color coding schemes that call for a different color of this connector.</b>  |

## Why the proposed change is adequate

The proposed color of black will maximize contrast with the specified color for PCI connectors (white). This will minimize any confusion between the two types of slots as the number of PCI Express slots in typical systems increases over time. Black is preferred because some system board manufacturers place connectors of other colors (red and green) on the board to identify specific slot features. Finally, since black connectors haven't been used since ISA cards, this color is now available to represent a PCI Express connector.